

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. *(canceled)*
2. *(currently amended)* The method according to claim + 16, ~~further comprising the steps of dividing wherein in the step of subdividing the scan field, the scan field is divided~~ into strips that form the partial areas regions.
3. *(currently amended)* The method according to claim 2, in which ~~the cut direction of the strips lies are sliced in a direction parallel to the image edge of the scanned image scan field.~~
4. *(currently amended)* Method according to claim + 2, in which the longitudinal axis of the strips during line-by-line scanning is perpendicular to the direction of the scan lines in the image first and second partial images.
5. *(currently amended)* Method according to claim + 16, in which in the determining step, the correlation of partial images is determined for each scan axis.
6. *(currently amended)* Method according to claim + 16, in which in the determining step, deviations are determined from the correlation of the partial areas images.
7. *(currently amended)* Method according to claim + 6, in which in the determining step, the deviations are combined as ~~support sites~~ data points for a deviation curve and ~~this~~ the deviation curve is used to determine a correction value of the scanner control signals.

8. *(currently amended)* Method according to claim + 7, in which in the determining step, the deviation curve is correlated with the individual frequency fractions of the scanner control (sine curves) for determination of the correction of the scanner control and correction values for the scanner control are determined via the correlation values.
9. *(currently amended)* Method according to claim 1, in which further comprising the step of storing the correction values for the scanner control are stored together with the time of the measurement correction values are determined.
10. *(currently amended)* Method according to claim + 9, in which a comparison further comprising the step of comparing the correction values recorded at different times occurs.
11. *(currently amended)* Method according to claim + 16, in which the optically recorded and/or electrically recorded further comprising the step of controlling or correcting the frequency of the scanner is controlled or corrected with the determined correction values.
12. *(currently amended)* Method according to claim + 2, in which in the step of subdividing the scan field, the cut slice direction of the partial image lies parallel to an image edge of the scan field.
13. *(currently amended)* Method according to claim + 2, in which in the step of subdividing the scan field, the cut slice direction of the partial images agrees with a scan axis.
14. *(currently amended)* Method according to claim + 2, in which in the step of subdividing the scan field, the cut slice direction of the partial images has is at an angle to at least one scan axis.
15. *(currently amended)* Method according to claim + 16, in which in the step of determining a correction value, a test pattern is used to determine the correction value.

16. (*new*) A method for scanner control in at least one scan axis in a laser scanning microscope, comprising the steps of:

- subdividing the scan field into partial regions;
- generating a first partial image by a forward line scan of at least one partial region;
- generating a second partial image by a back line scan of the partial region;
- comparing the first partial image with the second partial image to determine a deviation between the first and second partial images; and
- determining a correction value for the scanner control from the deviation between the first and second partial images.

17. (*new*) Method according to claim 8, in which when the deviation is caused only by a coefficient, a sine curve with nodal points at the reversal points of the line scan is always present.